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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,074	01/16/2004	Hideo Horigome	00862.023407.	5289

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EXAMINER

FANTU, YALKEW

ART UNIT	PAPER NUMBER
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2838

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12/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/758,074	Applicant(s) HORIGOME, HIDEO	
	Examiner Yalkew Fantu	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5, 6, 9, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya (US 5,525,888) in view of Horigome et al (US 5,631,677)

With respect to claims 1, 5 and 10, Toya discloses an electric charging apparatus (Fig. 1 element 30) for holding a secondary battery (rechargeable battery) (Fig. 3 element 20; Col. 3 line 49), the electric charging apparatus (fig. 1, 30) being attachable to an electronics apparatus (Fig. 1 element 10), in addition to that see (Col. 3 line 1-11). (The battery pack in Fig 1. element 20 contains rechargeable batteries). While the electronic charging apparatus is attached to the electronic apparatus (fig. 1, 10 and 30), of said electronic charging apparatus comprises:

A terminal (fig. 3, 34, 35 and 38, 39) configured to supply electric power from the secondary battery (20) held in the electronic charging apparatus (fig. 1, 1 and 30) to the electronic apparatus to which the electric charging apparatus is

attached (fig. 1, 1 and 30) is attached to the electronic apparatus 10 (when 10 is inserted in the charging apparatus; see also (col. 5, lines 28-30);

Reception means (Fig. 3 elements 12 and 35) for receiving residual (remaining) capacity information (Col.5 lines 17-18)corresponding to a residual capacity of the secondary battery (fig. 3, 20); a display means (Fig. 3 element 36), for displaying the battery residual capacity of the secondary battery; and display control means for causing said display means to display (Fig. 3 element 43) the battery residual capacity of the secondary battery (Col. 5 lines 17 and 18) based on residual capacity information received (Col. 5 lines 25-27); wherein the residual capacity of the secondary battery is detected by the electronic apparatus based on the electronic power being supplied via the terminal from the secondary battery to the electronics apparatus (col. 6, lines 44-48); residual transmission means (the microcomputer 43 gets information about the residual capacity of the battery 20) for transmitting residual capacity information detected by said residual capacity detection means (fig. 3, 42) to the electric charging unit (30); a capacity detection means for detecting residual capacity of battery (col. 5, lines 18-22) in a state where the secondary battery is under an approximately constant load (the charger switch 41 controlled by the microcomputer 43 is capable of controlling a constant load)(claims 5 and 10). Toya also discloses this as the phone is drawing "approximate constant power," (col. 5, lines 15-30, which is a term of degree).

But does not expressly disclose that the residual capacity of the battery is detected by the electronics apparatus based on the electric power. Horigome et al. (hereinafter, Horigome), however, discloses residual capacity of the battery is

detected by the electronic apparatus based on the electric power (col. 6, lines 36-44).

Toya and Horigome are analogous arts because they are from the same field of endeavor namely Battery charger and method of charging battery.

At the time of the invention it would have been obvious to a person having ordinary skill in the art to provide residual capacity of a battery detected by the electronic apparatus based on the electronic power as taught by Horigome to the battery charging apparatus of Toya to ensure that the battery capacity is in safe range. The reason is that battery capacity is being monitored during operation of the electronic apparatus to avoid loss of received information caused by inadequate battery capacity (col. 6, lines 37-44).

With respect to claim 2, Toya discloses the charging apparatus according to claim 1, wherein said display control means (Fig. 3 element 43) displays pattern in correspondence with the residual capacity information (See Col. 5 lines 21-22 and lines 25-27).

With respect to claim 6, Toya also teaches the electronic apparatus according to claim 5, where in residual capacity detection means (fig. 3, 43-microcomputer) detects the residual capacity based on an output voltage from the secondary battery (Col. 6 line 45 and 47).

With respect to claims 9 and 12, Toya teaches a battery residual capacity display control (Col. 4 line 66 and 67; Col. 5 line 1-7. see also Col. 5 line 16-27) method in an electric charging apparatus (fig. 1, 1 and 30) for holding and charging a secondary battery 20, the electric charging apparatus (fig. 1, 30 and

1) being attachable to an electronic apparatus 10 that can be driven with the secondary battery 20 while the electric charging apparatus (fig. 1, 1 and 30) is attached to the electronic apparatus, said method comprising: a step of supplying electric power (20 battery power) from the secondary battery (fig. 1, 30, 20A and 20B) to the electronics apparatus 10 while the electric charging apparatus 30 is attached to the electronic apparatus 10; and a reception step of receiving residual capacity information of the secondary battery (Col. 5 lines 21-27), detected by said electronic apparatus (fig. 3, 10 comes with a microcomputer 13) based on the supply electric power, from the electronic apparatus; and a display control step of causing a display unit to display a battery residual capacity (Col. 6 lines 40-50) of the secondary battery based on the residual capacity information received in said reception step (col. 6, lines 24-30); a communication unit (Fig. 3 element 12 and 35), a display control (Fig. 3 element 36 and 43) configured to display battery residual capacity information of the secondary battery, and a control unit (Fig. 3 element 43, microcomputer) (claim 12).

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toya (US 5,525,888) as applied to claim 1 above, and further in view of Horigome et al (US 5,631,677) combined with Nakamiya (US 6,563,766).

With respect to claim 3, Toya discloses the charging apparatus according to claim 1 as set forth above in the 35 USC 102 rejection, and electrical power input means based on a commercial power source (Fig. 3 element 32), however, does not explicitly disclose power source relay means for the driving voltage

inputted by said electric power input, in addition to the output voltage from the battery.

The Nakamiya reference teaches driving voltage inputted by said power input (Fig. 3 element 19) and voltage from the battery (Fig. 3 element 20. see Col. 6 lines 7-10). Nakamiya, however, does not disclose power source relay expressly.

The Horigome reference, on the other hand, teaches power source relay as the power-generating device (Fig. 1 element 40) introduces an electromagnetic induction type alternating current power generating device in which a power generating rotor (Fig. 1 element 42) so as to output a power induced in a power generating coil connected to a power generating stator (Fig. 1 element 42). As a result, a power is generated by the use of energies related to the user's activities, and thus generated power drives the device (see Col 9 lines 19-35).

With respect to claim 4, Toya discloses the charging apparatus according to claim 3, but, doesn't disclose wherein said power source relay means selects higher one of the output voltage from the battery and the driving voltage from the said electric power input means, and supplies the selected voltage. Horigome et al, however, teaches "for selecting either of these two driving power supplies, and a power –supply of the driving power supply and sending an output signal to an input port." (Col. 6 lines 7-16)

Toya, Nakamiya and Horigome et al are analogous art because they are from the same field of endeavor namely battery charging, battery capacity and voltage detection of electronic apparatus.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art, to have added a power source relay means and selecting higher one of the secondary battery and the driving voltage output voltages from said electrical input power. As well known in the art, a relay responds to a small current or voltage change by activating switches that help select power supply and send to the desired output. The suggestion and motivation for doing so would have been obvious in view of the teachings of Toya, Horigome et al, and Nakamiya as described above.

Therefore, it would have been obvious to combine Horigome et al, Nakamiya with Toya for the benefit of the charging apparatus comprising electric power input means, power source relay means, and power source selecting means of higher output voltage from the battery and electric power driving input to obtain the invention as specified in claims 3 and 4.

Claims 7, and 8 are rejected under 35 USC 103(a) as being unpatentable over Toya (US 5,525,888) in view of Horigome et al. (US 5,631,677).

With respect to 7 and 8, Toya discloses an electronics apparatus (Fig. 1 element 10), which an electronic charging unit (Fig. 3 element 30) comprising residual capacity detection means (Col. 5 lines 17-19), residual transmission means (Col. 5 lines 20-27), and a predetermined timing (Col. 3 lines 57-67). However, Toya reference does not disclose wherein said electronic apparatus is

an image printing apparatus as in claim 7, and an ink jet printing apparatus as in claim 8.

Horigome, however discloses imaging printing apparatus (abstract), which performs image printing by driving a print head (Fig. 1 element 12); and an ink jet printing apparatus (Fig. 1; Col. 3 lines 33-34) that forms an image of printing medium by discharging ink from the print head (Col. 5 lines 33-40).

Toya and Horigome et al. are analogous arts because they are from the same field of endeavor namely printing apparatus, battery charger and battery capacity detection.

At the time of the invention it would have been obvious to a person having ordinary skill in the art to provide charging unit with capacity detections, and residual transmission means as taught by Toya to the printer apparatus of Horigome et al. to provide a residual capacity detection means for the image printing apparatus, and ensure the battery charging condition of the printer.

The suggestion and motivation for doing would have been that the use of charging unit, and residual capacity detection informs the user about the battery power condition and prevents the printer from running out of power while in use.

Therefore it would have been obvious to combine Horigome et al with Toya for the benefit of printing apparatus with charging and capacity detection means to obtain the invention as specified in claims 7 and 8.

Response to Arguments

Applicant's arguments with respect to claims 1- 10 and 12 have been considered but are moot in view of the new ground(s) of rejection.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yalkew Fantu whose telephone number is 571-272-8928. The examiner can normally be reached on M - F: 7- 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm E. Ullah can be reached on 571-272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12/22/2007

/Gary L Laxton/

Gary L. Laxton
Primary Examiner
Art Unit 2838